Appl. No.: 10/517,495

LISTING OF THE CLAIMS

1. (Previously Presented) An acoustic liner arranged to attenuate sound, comprising a top sheet

having substantially linear characteristics and a liner core or cavity, wherein the top sheet

comprises a layer of a metallic foam.

2. (Previously Presented) An acoustic liner according to claim 1, wherein the top sheet has a

non-linearity factor within a range between 1.0 and 3.0.

3. (Previously Presented) An acoustic liner according to claim 2, wherein the nonlinearity factor

is within a range between 1 and 2.5.

4. (Previously Presented) An acoustic liner according to claim 3, wherein the nonlinearity factor

is within a range between 1.5 and 2.0.

5. (Previously Presented) An acoustic liner according to claim 1, wherein a first surface of said

metallic foam layer is attached to one side of said liner core.

Applicant: Sohan L. Sarin et al. Appl. No.: 10/517,495

6. (Previously Presented) An acoustic liner according to claim 1, wherein the liner core is a honeycomb core.

- 7. (Previously Presented) An acoustic liner according to claim 1, wherein the liner core is a core of metallic foam.
- 8. (Previously Presented) An acoustic liner according to claim 1, wherein the top sheet further comprises a perforated sheet attached to the metallic foam layer.
- 9. (Previously Presented) An acoustic liner according to claim 1, wherein the metallic foam layer is arranged to withstand temperatures above about 400° C.
- 10. (Previously Presented) An acoustic liner according to claim 9, wherein the metallic foam layer is arranged to withstand temperatures around 700° C.
- 11. (Previously Presented) An acoustic liner according to claim 10, wherein the metallic foam layer comprises a metal or metal alloy including Nickel, Titanium and/or Chromium.

Appl. No.: 10/517,495

12. (Previously Presented) An acoustic liner according to claim 1, wherein the metallic foam is

at least partly open-porous.

13. (Previously Presented) An acoustic liner according to claim 1, wherein the top sheet is

compressed.

14. (Previously Presented) An acoustic liner according to claim 13, wherein the top sheet is

compressed to a different degree in different areas of the sheet.

15. (Previously Presented) An acoustic liner according to claim 14, wherein the degree of

compression is stepwise increased/decreased over the top sheet.

16. (Previously Presented) An acoustic liner according to claim 14, wherein the degree of

compression is continuously changed over the top sheet.

17. (Previously Presented) An acoustic liner according to claim 1, wherein the top sheet is

designed for attenuating various acoustic environments such as different flight conditions for

Applicant: Sohan L. Sarin et al. Appl. No.: 10/517,495

aircraft engines.

- 18. (Previously Presented) Use of an acoustic liner according to claim 1 in a hot stream environment.
- 19. (Previously Presented) Use of an acoustic liner according to claim 18 in a hot area of an aircraft engine.
- 20. (Previously Presented) Method for manufacturing an acoustic liner, comprising the following steps:

forming a top sheet including a metallic foam layer and having substantially linear characteristics and brazing said top sheet onto one side of a liner core.

- 21. (Previously Presented) Method according to claim 20, wherein a perforated sheet is brazed onto the foam layer in forming the top sheet.
- 22. (Previously Presented) Method according to claim 20, wherein the top sheet is formed

Appl. No.: 10/517,495

through applying pressure to selected areas of the top sheet surface.

23. (Previously Presented) Method according to claim 22, wherein the pressure is applied to a

different degree in different areas of the top sheet.

24. (Previously Presented) Method according to claim 23, wherein the pressure applied over the

different areas is stepwise increased/decreased.

25. (Previously Presented) Method according to claim 23, wherein the pressure applied over the

different areas is increased/decreased in a continuous manner.

26. (Previously Presented) An acoustic liner, comprising:

a liner core; and

a top sheet comprising a layer of a metallic foam attached to the liner core, wherein the metallic

foam is compressed to satisfy flow and temperature linearity requirements of the acoustic liner.

27. (Previously Presented) The acoustic liner according to claim 26, wherein the metallic foam

Appl. No.: 10/517,495

is compressed to form a pre selected pattern which constrains a non linearity of the acoustic liner.

28. (Previously Presented) The acoustic liner according to claim 27, wherein the metallic foam

is compressed to form a step like surface which proximately faces a hot stream environment.

29. (Previously Presented) The acoustic liner according to claim 27, wherein the metallic foam

is compressed to form a curved surface which proximately faces a hot stream environment.